

PENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION (PCT Rule 61.2)

Date of mailing (day/month/year)
20 February 2001 (20.02.01)

To:
Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

International application No.
PCT/EP00/05998

Applicant's or agent's file reference
KP/B45186

International filing date (day/month/year)
28 June 2000 (28.06.00)

Priority date (day/month/year)
29 June 1999 (29.06.99)

Applicant

GARCON, Nathalie et al

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

15 December 2000 (15.12.00)

in a notice effecting later election filed with the International Bureau on:

2. The election was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference KP/B45186	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/05998	International filing date (day/month/year) 28/06/2000	(Earliest) Priority Date (day/month/year) 29/06/1999
Applicant SMITHKLINE BEECHAM BIOLOGICALS S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. **Certain claims were found unsearchable (See Box I).**

3. **Unity of invention is lacking (see Box II).**

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

USE OF CPG AS AN ADJUVANT FOR HIV VACCINE

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/05998

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7	A61K39/39	A61K39/21	A61P33/06	// (A61K39/39, 39:21)
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, MEDLINE, CHEM ABS Data, EMBASE, SCISEARCH

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DEMEL LUDWIG ET AL: "Immunostimulatory CpG motifs trigger a T helper-1 immune response to human immunodeficiency virus type-1 (HIV-1) gp160 envelope proteins." CLINICAL CHEMISTRY AND LABORATORY MEDICINE, vol. 37, no. 3, March 1999 (1999-03), pages 199-204, XP000982148 ISSN: 1434-6621 the whole document</p> <p>---</p>	1-14
X	<p>WO 99 27961 A (POWDERJECT VACCINES INC) 10 June 1999 (1999-06-10) abstract page 12, line 6 - line 29</p> <p>---</p> <p>-/-</p>	1-14

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

*T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

*X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

*Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

*& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

8 March 2001

19/03/2001

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
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Fax: (+31-70) 340-3016

Authorized officer

Niemann, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/05998

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 16884 A (GODART STEPHANE ANDRE GEORGES ;SMITHKLINE BEECHAM BIOLOG (BE); BRU) 8 April 1999 (1999-04-08) cited in the application the whole document ---	
A	WO 92 06113 A (SMITHKLINE BEECHAM BIOLOG) 16 April 1992 (1992-04-16) cited in the application the whole document ---	
A	WO 96 02555 A (UNIV IOWA RES FOUND) 1 February 1996 (1996-02-01) cited in the application the whole document ---	
A	WO 98 37919 A (UNIV IOWA RES FOUND) 3 September 1998 (1998-09-03) the whole document ---	
P,X	WO 99 33488 A (DALEMANS WILFRIED L J ;PRIEELS JEAN PAUL (BE); SMITHKLINE BEECHAM) 8 July 1999 (1999-07-08) claims 1-8 ---	1,6-14
P,X	WO 00 23105 A (SMITHKLINE BEECHAM BIOLOG ;GARCON NATHALIE (BE)) 27 April 2000 (2000-04-27) claims 1-26 ---	1,6-14
E	WO 00 62800 A (SMITHKLINE BEECHAM BIOLOG ;FRIEDE MARTIN (BE); GARCON NATHALIE (BE)) 26 October 2000 (2000-10-26) claims 1-29 ---	1,6-14
E	WO 00 67787 A (MOSS RONALD B ;IMMUNE RESPONSE CORP INC (US)) 16 November 2000 (2000-11-16) claims 1-36 -----	1,6-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/EP 00/05998

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9927961 A	10-06-1999	AU 1619999 A EP 1035867 A		16-06-1999 20-09-2000
WO 9916884 A	08-04-1999	AU 1025599 A BR 9812547 A CN 1279718 T EP 1015596 A NO 20001508 A PL 339432 A		23-04-1999 25-07-2000 10-01-2001 05-07-2000 18-05-2000 18-12-2000
WO 9206113 A	16-04-1992	AU 654970 B AU 8510991 A CA 2092827 A EP 0550485 A EP 0644201 A IE 913385 A JP 6501151 T MX 9101275 A NZ 239948 A PT 99063 A, B ZA 9107747 A AP 368 A BR 9107294 A CN 1064891 A CZ 9301957 A WO 9216556 A FI 934133 A HU 67011 A NO 933342 A SK 82593 A		01-12-1994 28-04-1992 29-03-1992 14-07-1993 22-03-1995 08-04-1992 10-02-1994 04-05-1992 27-07-1993 31-08-1992 30-09-1992 28-10-1994 14-06-1994 30-09-1992 18-05-1994 01-10-1992 21-09-1993 30-01-1995 20-09-1993 12-01-1994
WO 9602555 A	01-02-1996	AU 713040 B AU 1912795 A CA 2194761 A EP 0772619 A JP 10506265 T US 6008200 A		18-11-1999 16-02-1996 01-02-1996 14-05-1997 23-06-1998 28-12-1999
WO 9837919 A	03-09-1998	AU 6667498 A EP 1039935 A		18-09-1998 04-10-2000
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WO 0023105 A	27-04-2000	AU 1151800 A		08-05-2000
WO 0062800 A	26-10-2000	AU 4114900 A		02-11-2000
WO 0067787 A	16-11-2000	AU 4992900 A		21-11-2000

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 98 /25563

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Although claims 1-38, 56 and 64-69 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.

Claims Nos.: 1-38 56 64-69

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

INTERNATIONAL SEARCH REPORT

Info. on patent family members

Int'l Application No
PCT, US 98/25563

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9001949 A	08-03-1990	AU 4187689 A CA 1337047 A DE 68922109 D DE 68922109 T EP 0431023 A US 5476844 A		23-03-1990 19-09-1995 11-05-1995 12-10-1995 12-06-1991 19-12-1995
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WO 9409819 A	11-05-1994	AU 5547594 A		24-05-1994
WO 9740163 A	30-10-1997	AU 2699497 A CA 2252375 A		12-11-1997 30-10-1997
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US 4629782 A	16-12-1986	NONE		
WO 9424263 A	27-10-1994	AT 148497 T AU 674742 B AU 6435194 A BG 61993 B BG 100047 A BR 9406455 A CA 2159452 A CN 1120852 A CZ 9502608 A DE 69401651 D DE 69401651 T DK 693119 T EP 0693119 A EP 0734737 A ES 2098131 T FI 954788 A GR 3022939 T HK 1000351 A HU 73516 A JP 8509604 T LV 11833 A LV 11833 B NO 953994 A NZ 263606 A PL 311005 A		15-02-1997 09-01-1997 08-11-1994 30-12-1998 30-04-1996 02-01-1996 27-10-1994 17-04-1996 15-05-1996 13-03-1997 15-05-1997 28-07-1997 24-01-1996 02-10-1996 16-04-1997 06-10-1995 30-06-1997 06-03-1998 28-08-1996 15-10-1996 20-08-1997 20-12-1997 06-10-1995 22-08-1997 22-01-1996

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 98/25563

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9424263 A		SG 48696 A	18-05-1998
		SI 693119 T	31-10-1997
		SK 124895 A	08-01-1997
		US 5630796 A	20-05-1997
		ZA 9402442 A	10-04-1995

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 98/25563

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: 1-38, 56, 64-69
because they relate to subject matter not required to be searched by this Authority, namely:
See FURTHER INFORMATION SHEET PCT/ISA/210
2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB/JS 98/25563

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 94 24263 A (SARPHIE DAVID FRANCIS ; BELLHOUSE BRIAN JOHN (GB); GREENFORD JOHN C) 27 October 1994 see the whole document, especially page 3, lines 13-36 see the whole document	1-70

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 January 2001 (04.01.2001)

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(10) International Publication Number
WO 01/00232 A2

- (51) International Patent Classification⁷: **A61K 39/00**
- (21) International Application Number: PCT/EP00/05998
- (22) International Filing Date: 28 June 2000 (28.06.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
9915205.0 29 June 1999 (29.06.1999) GB
0002200.4 31 January 2000 (31.01.2000) GB
- (71) Applicant (for all designated States except US):
SMITHKLINE BEECHAM BIOLOGICALS S.A.
[BE/BE]; Rue de l'Institut 89, B-1330 Rixensart (BE).
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- (75) Inventors/Applicants (for US only): GARCON, Nathalie [FR/BE]; SmithKline Beecham Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). VOSS, Gerald [DE/BE]; SmithKline Beecham Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE).
- (74) Agent: PRIVETT, Kathryn; SmithKline Beecham, Corporate Intellectual Property, Two New Horizons Court, Brentford, Middlesex TW8 9EP (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/00232 A2

(54) Title: VACCINE

(57) Abstract: A vaccine formulation for the prevention or amelioration of HIV infection in humans is provided. The vaccine comprises an HIV antigen, especially a protein which comprises Nef and/or Tat of HIV, and an immunostimulatory CpG oligonucleotide. Methods for making the vaccine formulation of the invention are described. Patients may also be treated by pre-administration of the CpG oligonucleotide prior to administration of the HIV antigen.